

SOME OBSERVATIONS ON LASIOGLOSSUM (HEMIHALICTUS) LUSTRANS (HYMENOPTERA, HALICTIDÆ)

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The only known species of the subgenus *Hemihalictus*, *Lasioglossum lustrans* (Cockerell),<sup>1</sup> hitherto known only from females, was described in 1897 from specimens collected near Silver City, New Mexico, on flowers of *Pyrrhopappus*, probably *P. rothrockii*, and was recorded by Cockerell in 1900<sup>2</sup> from Las Vegas, New Mexico, on flowers of *Pyrrhopappus*. In 1938 it was recorded by Brimley<sup>3</sup> from Raleigh, North Carolina, on flowers of cucurbits. It is of interest that the species is widespread in the territory intervening between New Mexico and North Carolina, and occurs to the northward at least as far as Michigan.

Unlike most species of Halictinæ, *L. lustrans* is oligolectic. During eighteen months at Hattiesburg and Camp Shelby, Mississippi, the author obtained only two specimens (both females) on flowers other than those of *Pyrrhopappus carolinianus*, and these two were on another yellow composite of the chicory tribe. Seventy-nine specimens of both sexes were collected on *Pyrrhopappus carolinianus*. Since the flowers of this plant close soon after the sun strikes them in the morning, all were collected in the early morning hours. Dates of collection range from April 15 to August 26. Males were collected only from June 28 to July 29, 1944.

The species was also collected by the author from April 7 to 12, 1946, on flowers of a yellow composite similar to *Pyrrhopappus*, at Jefferson, Texas; Shreveport, Louisiana; Texarkana, Fulton, Prescott, and Brinkley, Arkansas; and Oakland and Bolivar, Tennessee. All these specimens were females, the season probably being too early for males. Mr. P. H. Timberlake sends me a

<sup>1</sup> Cockerell, 1897, Trans. Am. Ent. Soc., 24: 147.

<sup>2</sup> Cockerell, 1900, Ann. Mag. Nat. Hist., (7) 5: 416.

<sup>3</sup> Brimley, 1938, Insects of North Carolina, p. 456.

record of a specimen collected at Nottawa, Michigan, May 30, 1941 (R. R. Dreisbach).

It is interesting that the male is fully as rigidly oligolectic as the female. This is not always the case among bees.

The male is remarkable (although not unique in the genus) for its short broad body and short antennæ, so that it looks like a female. The male is described as follows:

Length 7 to 8 mm. Black, mandibles reddish medially, under side of flagellum brown, distitarsi rufescent, posterior margins of abdominal terga often narrowly and feebly brown. Pubescence short, sparse, whitish, not forming abdominal bands. Sculpturing fine and weak; clypeus smooth between widely separated punctures; supra-clypeal area with widely separated small punctures, area between tessellated; paraocular areas with rather fine close punctures, vertex with fine sparse punctures, surface between smooth; supra-antennal area finely and closely punctured; mesoscutum and mesoscutellum with widely separated fine punctures, surface between tessellated; enclosure of propodeum much wider than metanotum, not definitely margined, with fine radiating rugæ laterally, medially with the rugæ irregularly anastomosing; abdomen with very fine punctures. Head approximately round seen from front, the eyes very widely separated. Clypeus low and broad, truncated anteriorly; labrum produced to median apical process similar to but shorter than that of female, and margined with long setæ; mandibles very long, slender, pointed, when closed apex of one reaches base of other; flagellum short and robust, all segments except first and last broader than long. Eighth abdominal (seventh metasomal) tergum with pygidial plate clearly defined posteriorly; posterior margin of sixth abdominal sternum nearly straight; gonocoxites each with thin flat apical process arising laterad to base of gonostylus, and directed forward beneath gonocoxite, ending near base of latter; gonostylus small, simple, blunt.

Among the numerous specimens examined, all had only two submarginal cells. In view of this and the rather unusual male characters (mandibles, antennæ, and genitalia) it is evident that *Hemihalictus* can be retained as a distinct subgenus.